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09/884,925	06/21/2001	Jack Chen	4504-030	3893

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EXAMINER

VILLECCO, JOHN M

ART UNIT	PAPER NUMBER
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2612

DATE MAILED: 10/05/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/884,925

Applicant(s)

CHEN ET AL.

Examiner

John M. Villecco

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-27 is/are rejected.
- 7) ☒ Claim(s) 16 and 17 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 June 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date ____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: ____.

DETAILED ACTION

Specification

1. The disclosure is objected to because of the following informalities:
 - On page 6, line 17 applicant refers to reference number “DPS 242”. This appears to be a typographical error and that the applicant meant to use the phrase – DSP 242 –.

Appropriate correction is required.

Claim Objections

2. Claims 16 and 17 are objected to because of the following informalities:
 - Regarding claim 17, applicant begins the claim with the characters “*p+11Xmultimedia”. This appears to be a typographical error.
 - As for claim 16, applicant includes the phrase “first analog signngngngngngngnal”. This appears to be a typographical error and that the applicant means to use the phrase – first analog signal –.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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4. Claim 23 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

5. Claim 23 recites the limitation "and then transmitting said first and second analog signals to said analog-digital converter" in line 5. However, claim 15, from which claim 23 depends, includes two analog-digital converters. It is clear from Figure 2 that the multiplexer (25) receives the 1st and 2nd digital signals and then sends them to the processor (26) not to a 3rd analog-digital converter. Furthermore, the signals have already been converted to digital signals and therefore are not analog signals anymore. Therefore, there is not support in the specification for sending the first and second analog signals to a single analog-digital converter. For examination purposes it will be assumed that the applicant meant to claim that the multiplexer transferring the digital signals to a processor.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7. **Claims 15-17, 22, and 25 are rejected under 35 U.S.C. 102(e) as being anticipated by Suga et al. (U.S. Patent No. 6,192,191).**

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8. Regarding **claim 15**, Suga discloses an image pickup device (2402), a sound input unit (2411) such as a microphone, a first A/D converter (2403) connected to the image pickup device (2402) for converting the signal to a digital signal, a second A/D converter (2412) connected to the sound pickup device (2411) to convert the signal to a digital signal, and a CPU (2407) and logic circuits within the record interface (2406) which serve as the processor since it produces a multimedia data file consisting of a digital image and sound information. This data is then delivered to the host computer (2415). See column 9, line 10 to column 10, line 33. And Figures 24, 31 and 32.

9. As for **claim 16**, Suga discloses a lens (2401) and a CCD, which serves as the photoelectric converting element for generating a first analog signal. See column 19, lines 10-13.

10. With regard to **claim 17**, as mentioned above, Suga discloses a CCD for capturing an image of a scene.

11. Regarding **claim 22**, Suga discloses a sound coding unit (2413) which acts as the DSP for receiving the signal from the second A/D converter and processes the signal before outputting it.

12. As for **claim 25**, Suga discloses that sound files can be annotations which are added to captured images. See column 19, lines 46-51.

Claim Rejections - 35 USC § 103

13. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

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having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

14. **Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Suga et al. (U.S. Patent No. 6,192,191) in view of Maxium Technologies (Internet Publication, 2000).**

15. Regarding *claim 18*, as mentioned above in the discussion of claim 16, Suga discloses all of the limitations of the parent claim. However, Suga fails to explicitly state that the image sensor is a CIS. The Maxium Technologies Publication on the other hand, discloses that the use of contact image sensors (CIS) is well known in the art. The integration of CIS image sensors reduce the space needed for other components allowing for thinner and lighter products. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use a CIS image sensor instead of the CCD image sensor in Suga so that the camera is made smaller and lighter.

16. **Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Suga et al. (U.S. Patent No. 6,192,191) in view of Ochi et al. (U.S. Patent No. 6,233,014).**

17. Regarding *claim 19*, as mentioned above in the discussion of claim 16, Suga discloses all of the limitations of the parent claim. However, Suga fails to explicitly disclose a reflection mirror for transmitting the image signal to the lens. Ochi, on the other hand, discloses that it is well known in the art to include a mirror for directing incoming light to a lens. More specifically Ochi discloses a mirror (14) for directing the incoming light to a lens (17). See Figure 1 and column 4, lines 18-29. This camera arrangement serves as an alternative arrangement for capturing an image. A line sensor camera can be made cheaper and smaller than a full image sensor camera. See column 4, lines 26-29. Therefore, it would have been obvious to one of

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ordinary skill in the art at the time the invention was made to construct the camera of Suga in a manner similar to Ochi so that the camera can be made more cheaply and smaller.

18. **Claims 20 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Suga et al. (U.S. Patent No. 6,192,191) in view of Haranishi (U.S. Patent No. 5,764,779).**

19. Regarding *claim 20*, as mentioned above in the discussion of claim 15, Suga discloses all of the limitations of the parent claim. Additionally, Suga discloses that the sound input unit (2411) can be a microphone (col. 4, lines 38-39). Suga, however, fails to explicitly state that the microphone includes a filter for filtering off a noise signal from the analog signal. Haranishi, on the other hand, discloses that it is well known in the art to provide filters in a microphone for filter off noise. More specifically, Haranishi discloses a bandpass filter (2) for filter out noise from a microphone (1) and allowing only desired frequencies to pass. This feature allows for the microphone to only allow frequencies of the human voice to pass, thus increasing the quality of the signal. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include a filter in the microphone of Suga so that a higher quality sound signal is generated.

20. As for *claim 21*, Haranishi discloses only allowing frequencies of the human voice to pass through the bandpass filter (2). See the abstract.

21. **Claims 23 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Suga et al. (U.S. Patent No. 6,192,191) in view of Sakagami et al. (U.S. Patent No. 5,497,194).**

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22. Regarding **claim 23**, as mentioned above in the discussion of claim 15, Suga discloses all of the limitations of the parent claim. However, Suga fails to explicitly disclose a multiplexer for multitasking the first and second digital signals. Sakagami, on the other hand, discloses that it is well known in the art to include a multiplexer for selecting either an image or voice signal to be passed. More specifically, Sakagami discloses an electronic camera (11) which includes a microphone (15), and image pickup device (14), and a multiplexer (18) for selecting to pass either the voice or image signal. See Figure 1. The use of a multiplexer to send one signal or the other allows the camera to reduce circuits in the camera by reducing the number of channels for the number of different signals that are generated. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include a multiplexer for selecting a desired signal to pass so that the number of channels/circuits used in the cameras construction can be reduced.

23. As for **claim 24**, Sakagami discloses that the image and sound data are recorded at different times. When it is desired to capture sound, the multiplexer switch (18) is switched to side a. Since the image and sound data are captured at different times. The switch (18) acts as a multiplexer that performs time-sharing multitasking.

24. **Claim 26 is rejected under 35 U.S.C. 103(a) as being unpatentable over Suga et al. (U.S. Patent No. 6,192,191) in view of Murphy et al. (U.S. Publ. No. 2002/0065464).**

25. Regarding claim 26, as mentioned above in the discussion of claim 15, Suga discloses all of the limitations of the parent claim. However, Suga fails to specifically disclose that a sound signal is a voice control signal for starting to produce the multimedia data file. Murphy, on the

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other hand, discloses that it is well known in the art to include voice recognition software that enables a user to initiate an image capture routine. See paragraph 0041. This feature allows for hand off operation, thus increasing the ease of use. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include voice recognition software in the camera of Suga so that image capture can be accomplished in a hands-free manner.

26. **Claim 27 is rejected under 35 U.S.C. 103(a) as being unpatentable over Suga et al. (U.S. Patent No. 6,192,191) in view of Murphy et al. (U.S. Publ. No. 2002/0065464) and further in view of Rudd et al. (U.S. Patent No. 6,295,391).**

27. Regarding *claim 27*, as mentioned above in the discussion of claim 26, both Suga and Murphy disclose all of the limitations of the parent claim. However, neither Suga nor Murphy specifically discloses generating the voice control signal in the sound pickup device and transferring the voice control signal to the personal computer to be identified. Rudd, on the other hand, discloses that it is well known in the art to transfer voice commands to a remote computer for voice recognition. More specifically, Rudd discloses that the voice disposition commands are transferred to the computer (200) and voice analysis software (224) operates to determine what function to perform. Although the operation is not for starting an image capture routine, the voice analysis is still taking place in the host computer (200). It is well known in the art that computer processors are more powerful than processors found in cameras. Therefore it would have been obvious to one of ordinary skill in the art to perform the voice recognition in the

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computer of Suga since the processor is more powerful and therefore, the circuitry for voice recognition can be eliminated from the camera.

28. Claims 1-3, 6, and 10-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sakagami et al. (U.S. Patent No. 5,497,194) in view of Suga et al. (U.S. Patent No. 6,192,191).

29. Regarding *claim 1*, Sakagami discloses an image pickup device (14), a microphone (16), and an A/D converter (19) for receiving both the sound and image and converting it into a digital signal. Sakagami discloses that the image data and voice data are processed and stored in the IC memory card (12).

Sakagami, however, fails to specifically disclose that the processor produce a multimedia data file consisting of image data and sound data that is provided to a personal computer. Suga, on the other hand, discloses an image pickup device (2402), a sound input unit (2411) such as a microphone, and a CPU (2407) and logic circuits within the record interface (2406) which serve as the processor since it produces a multimedia data file consisting of a digital image and sound information. This data is then delivered to the host computer (2415). See column 9, line 10 to column 10, line 33. And Figures 24, 31 and 32. By forming a multimedia data file, the sound data that is associated with each image can be reliable recalled upon reproduction. Therefore, it would have been obvious to one of ordinary skill in the art to produce a multimedia data file in the camera of Sakagami so that image and voice data can be reliably reproduced.

30. As for *claim 2*, Sakagami discloses a lens (13) and the image pickup device would inherently include a photoelectric converting element to produce a first analog signal.

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31. With regard to *claim 3*, Suga discloses a lens (2401) and a CCD, which serves as the photoelectric converting element for generating a first analog signal. See column 19, lines 10-13.

32. Regarding *claim 6*, Sakagami discloses the use of a microphone (16) for picking up audio signals and transforming them to a second analog signal.

33. As for *claim 10*, Sakagami discloses that it is well known in the art to include a multiplexer for selecting either an image or voice signal to be passed. More specifically, Sakagami discloses a multiplexer (18) for selecting to pass either the voice or image signal. See Figure 1. The use of a multiplexer to send one signal or the other allows the camera to reduce circuits in the camera by reducing the number of channels for the number of different signals that are generated.

34. With regard to *claim 11*, Sakagami discloses that the image and sound data are recorded at different times. When it is desired to capture sound, the multiplexer switch (18) is switched to side a. Since the image and sound data are captured at different times. The switch (18) acts as a multiplexer that performs time-sharing multitasking.

35. Regarding *claim 12*, Suga discloses that sound files can be annotations which are added to captured images. See column 19, lines 46-51.

36. **Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sakagami et al. (U.S. Patent No. 5,497,194) in view of Suga et al. (U.S. Patent No. 6,192,191) and further in view of Maxium Technologies (Internet Publication, 2000).**

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37. Regarding *claim 4*, as mentioned above in the discussion of claim 2, both Sakagami and Suga disclose all of the limitations of the parent claim. However, neither of the aforementioned references specifically discloses that the image sensor is a contact image sensor (CIS). The Maxium Technologies Publication on the other hand, discloses that the use of contact image sensors (CIS) is well known in the art. The integration of CIS image sensors reduce the space needed for other components allowing for thinner and lighter products. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use a CIS image sensor instead of the CCD image sensor in Suga so that the camera is made smaller and lighter.

38. **Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sakagami et al. (U.S. Patent No. 5,497,194) in view of Suga et al. (U.S. Patent No. 6,192,191) and further in view of Ochi et al. (U.S. Patent No. 6,233,014).**

39. Regarding *claim 5*, as mentioned above in the discussion of claim 2, both Sakagami and Suga disclose all of the limitations of the parent claim. However, neither of the aforementioned references specifically discloses a reflection mirror for transmitting the image signal to the lens. Ochi, on the other hand, discloses that it is well known in the art to include a mirror for directing incoming light to a lens. More specifically Ochi discloses a mirror (14) for directing the incoming light to a lens (17). See Figure 1 and column 4, lines 18-29. This camera arrangement serves as an alternative arrangement for capturing an image. A line sensor camera can be made cheaper and smaller than a full image sensor camera. See column 4, lines 26-29. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to

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construct the camera of Sakagami in a manner similar to Ochi so that the camera can be made more cheaply and smaller.

40. **Claims 7-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sakagami et al. (U.S. Patent No. 5,497,194) in view of Suga et al. (U.S. Patent No. 6,192,191) and further in view of Haranishi (U.S. Patent No. 5,764,779).**

41. Regarding ***claim 7***, as mentioned above in the discussion of claim 1, both Sakagami and Suga disclose all of the limitations of the parent claim. Additionally, Suga discloses that the sound input unit (2411) can be a microphone (col. 4, lines 38-39). Neither Suga nor Sakagami, however, explicitly state that the microphone includes a filter for filtering off a noise signal from the analog signal. Haranishi, on the other hand, discloses that it is well known in the art to provide filters in a microphone for filter off noise. More specifically, Haranishi discloses a bandpass filter (2) for filter out noise from a microphone (1) and allowing only desired frequencies to pass. This feature allows for the microphone to only allow frequencies of the human voice to pass, thus increasing the quality of the signal. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include a filter in the microphone of Sakagami so that a higher quality sound signal is generated.

42. With regard to ***claim 8***, Haranishi discloses that the bandpass filter extracts only the voice frequency band from 50Hz to 4KHz, therefore, all other signal are filter off.

43. As for ***claim 9***, Haranishi discloses only allowing frequencies of the human voice to pass through the bandpass filter (2). See the abstract.

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44. **Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sakagami et al. (U.S. Patent No. 5,497,194) in view of Suga et al. (U.S. Patent No. 6,192,191) and further in view of Murphy et al. (U.S. Publ. No. 2002/0065464).**

45. Regarding claim 13, as mentioned above in the discussion of claim 1, both Sakagami and Suga disclose all of the limitations of the parent claim. However, neither of the aforementioned references specifically discloses that a sound signal is a voice control signal for starting to produce the multimedia data file. Murphy, on the other hand, discloses that it is well known in the art to include voice recognition software that enables a user to initiate an image capture routine. See paragraph 0041. This feature allows for hands-free operation, thus increasing the ease of use. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include voice recognition software in the camera of Sakagami so that image capture can be accomplished in a hands-free manner.

46. **Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sakagami et al. (U.S. Patent No. 5,497,194) in view of Suga et al. (U.S. Patent No. 6,192,191) and further in view of Murphy et al. (U.S. Publ. No. 2002/0065464) and Rudd et al. (U.S. Patent No. 6,295,391).**

47. Regarding *claim 14*, as mentioned above in the discussion of claim 13, Sakagami, Suga and Murphy disclose all of the limitations of the parent claim. However, none of the aforementioned references specifically disclose generating the voice control signal in the sound pickup device and transferring the voice control signal to the personal computer to be identified. Rudd, on the other hand, discloses that it is well known in the art to transfer voice commands to

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a remote computer for voice recognition. More specifically, Rudd discloses that the voice disposition commands are transferred to the computer (200) and voice analysis software (224) operates to determine what function to perform. Although the operation is not for starting an image capture routine, the voice analysis is still taking place in the host computer (200). It is well known in the art that computer processors are more powerful than processors found in cameras. Therefore it would have been obvious to one of ordinary skill in the art to perform the voice recognition in the computer of Suga since the processor is more powerful and therefore, the circuitry for voice recognition can be eliminated from the camera.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks
Washington, D.C. 20231

or faxed to:

(703) 872-9306 (For either formal or informal communications intended for entry. For informal or draft communications, please label **"PROPOSED"** or **"DRAFT"**)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington VA, Sixth Floor (Receptionist).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John M. Villecco whose telephone number is (703) 305-1460. The examiner can normally be reached on Monday-Thursday.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wendy Garber can be reached on (703) 305-4929. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



John M. Villecco
September 27, 2004



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